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10/035,516	11/09/2001	Po-Hua Fang	YUSO-132	3082

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EXAMINER

LEE, CHEUKFAN

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/035,516	Applicant(s) FANG, PO-HUA	
	Examiner Cheukfan Lee	Art Unit 2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1-35 are pending. Claims 1 and 18 are independent.
2. Independent claims 1 and 18 have been amended, in the amendment filed with the RCE on September 29, 2006, to include new language "wherein the appropriate length comprises a length that is less than a length of the document". This limitation is also met by Seto (U.S. Patent No. 5,124,810) applied in the rejection of the Office Action dated April 6, 2006 because the total length of the document that is fed meets the claimed "appropriate length", and this total length of the document inherently comprises any length that is less than a length of the document, the total length of the document being "a length of the document". Please refer to the rejections addressed below.
3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
4. Claims 1, 3, 11-14, 17-19, 30-33, and 35 are rejected under 35 U.S.C. 102(b) as being anticipated by Seto (U.S. Patent No. 5,124,810).

Regarding claim 1, Seto discloses a method of detecting alignment of a document. The method comprises providing an optical scanner having an automatic

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document feeder (hereinafter referred to as ADF) having a colored pattern layer in a scanning window of the optical scanner (the reference pattern layer having the white and black colors formed on 18a of guide plate 18 as shown in Figs. 7A and 7B) (col. 7, lines 55-62), the document (2) having at least one side edge, actuating the ADF to feed in the document (2) to a first position (the position of the document 2 at the beginning of image reading of the document), capturing a first image of the document while the document is in the first position (Fig. 16A, Fig. 16B), feeding the document to a second position (the position of the document 2 at the end of image reading of the document), capturing a second image of the document while the document is in the second position (Fig. 16C, Fig. 16D), and calculating a slant value (the skew in feeding of the document 2) by comparing the first image (Fig. 16A, Fig. 16B) with the second image (Fig. 16C, Fig. 16D) (col. 14, line 41 – col. 15, line 25, col. 7, lines 55-62) (refer to col. 12, line 55 – col. 13, line 3, if needed).

The newly added limitation “wherein the appropriate length comprises a length that is less than a length of the document” is also met by Seto (U.S. Patent No. 5,124,810) because the total length of the document that is fed meets the claimed “appropriate length”, and this total length of the document inherently comprises any length that is less than a length of the document, the total length of the document being “a length of the document”.

Regarding claim 3, the side edge (left or right side) of the document (2) is substantially parallel to the document feeding direction (Fig. 7A).

Regarding claim 11, Seto further discloses comparing the skew value with a preset value (tolerable limit) (col. 15, lines 10-25).

Regarding claim 12, it is inherent in Seto that the preset value (tolerable limit) is tested and provided for the document fed into the scanning area (Fig. 7A) a length sufficient to enable measuring of the skew.

Regarding claim 13, the claimed step is inherent in Seto that the document is scanned in response to the skew being smaller than the preset value (tolerable limit) (col. 15, lines 10-25).

Regarding claim 14, Seto further discloses that the document scanning is terminated when the skew is larger than the preset value (tolerable limit) (col. 15, lines 10-32).

Regarding claim 17, Seto discussed for claim 13 (and claim 14) above further discloses setting off an alarm in response to the skew (slant value) being larger than the preset value (sending a warning to the user) (col. 15, lines 10-32).

Claim 18 is rejected for the same reason as given for claim 1, for claiming the limitations of claim 1, except for the colored pattern layer of the AFD. Please see discussion of Seto for claim 1.

Claim 19 claims "arranging a colored pattern in or near a scanning window of the optical scanner". Please refer to the discussion of Seto for claim 1 with respect to the colored pattern layer.

For claims 30-33 and 35, see discussions for claims 30-33 and 35, respectively, for claiming the same or similar limitations.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 2 and 20-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seto (U.S. Patent No. 5,124,810) in view of Pasco et al. (U.S. Patent No. 6,064,778). Pasco et al. was cited/applied in the previous Office Action.

Regarding claims 2 and 20, Seto discussed for claims 1 and 18 above does not disclose a colored pattern layer of a color different from that of the document. The pattern layer on part (18a) of the guide plate (18) is black and white, and the document (2) is black and white (col. 7, lines 55-62, col. 14, lines 41-68). However, using a colored pattern layer that has a color different from that of the document in detecting a skew of a document being fed in a scanner having an optical sensor sensitive to color (in addition to black color), in order to achieve high contrast between the pattern layer and the document, is taught by Pasco et al. (col. 4, lines 60-67, Figs. 1 and 2, col. 4, lines 29-36, col. 5, lines 10-11). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the concept of Pasco et al. to

substitute the black and white pattern layer formed on part 18a of guide plate 18 of Seto with a colored pattern layer having a color different from that of the document (2), in order to achieve high contrast between the pattern layer and the document, enabling accurate document skew detection.

Regarding claim 21, a first edge of the document (2) (seen in Fig. 7A) of Seto is positioned between the scanning window and the pattern (on 18a of 18 in Fig. 7A).

Regarding claims 22-24, in Seto discussed for claims 18-21 above, in calculating the skew of the document (2) being fed, positions x_1 and x_2 of the side edge of the document at the beginning of image reading and the end of image reading of the document, respectively, are obtained (Figs. 16A-16D, col. 14, lines 41-68). It is inherent that the positions x_1 and x_2 are obtained or calculated with reference to a reference point. Although Seto does not disclose defining a reference point on a scan line or in the colored pattern layer (on 18a of 18), one of ordinary skill in the art would have realized the advantage of defining a reference point on a scan line or in the pattern layer (on 18a or 18), which is relatively close to the reading location, over defining a reference point somewhere more remote from the reading location as shown in Fig. 7A, the somewhere such as at the edge of the document (holding) plate (12) (Fig. 14C, col. 13, lines 28-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the positions x_1 and x_2 of the side edge of Seto in view of Pasco et al. and the reference point on a scan line or in the pattern layer to obtain a first

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distance (using x_1 and the reference point) comprising a distance from the side edge (at x_1) of the document to the reference point on a scan line or in the pattern layer, and to obtain a second a second distance (using x_2 and the reference point), in order to provide a position of the document being fed. Please note that a length by which the side edge of the document (2), or the document (2), is fed in the intended feeding direction from the beginning of image reading of the document (2) to the end of image reading of the document (2) is sufficient to enable measuring of the skew (col. 14, lines 41-68). Please also note that the claims only define the first distance and the second distance but do not apply any of the distances in the method.

7. Claims 4-6, 15, 16, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seto (U.S. Patent No. 5,124,810).

Regarding claims 4-6, in Seto discussed for claim 1 above, in calculating the skew of the document (2) being fed, positions x_1 and x_2 of the side edge of the document at the beginning of image reading and the end of image reading of the document, respectively, are obtained (Figs. 16A-16D, col. 14, lines 41-68). It is inherent that the positions x_1 and x_2 are obtained or calculated with reference to a reference point. Although Seto does not disclose defining a reference point on a scan line or in the colored pattern layer (on 18a of 18), one of ordinary skill in the art would have realized the advantage of defining a reference point on a scan line or in the pattern layer (on 18a or 18), which is relatively close to the reading location, over defining a reference point somewhere more remote from the reading location as shown in Fig. 7A, the

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somewhere such as at the edge of the document (holding) plate (12) (Fig. 14C, col. 13, lines 28-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the positions x_1 and x_2 of the side edge of Seto and the reference point on a scan line or in the pattern layer to obtain a first distance (using x_1 and the reference point) comprising a distance from the side edge (at x_1) of the document to the reference point on a scan line or in the pattern layer, and to obtain a second a second distance (using x_2 and the reference point), in order to provide a position of the document being fed. Please note that a length by which the side edge of the document (2), or the document (2), is fed in the intended feeding direction from the beginning of image reading of the document (2) to the end of image reading of the document (2) meets the claimed "appropriate length" (also see col. 14, lines 41-68). Please also note that the claims only define the first distance and the second distance but do not apply any of the distances in the method.

Regarding claims 15 and 16, Seto discussed for claim 14 above does not explicitly disclose manually taking out the document (2) and repeating the whole process, i.e., B to E of claim 1, as claimed. However, one of ordinary skill in the art would have realized the advantage of manually taking out the document (2), reinserting the document in the feeder and repeating the scan process. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to manually take out the document (2) of Seto, place it in the feeder, and having the scan

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process repeated in order to complete reproducing the image or producing the image data of the document (2) without skew or with acceptable skew.

Claim 34 recites "repositioning the document". As discussed for claims 15 and 16 above, Seto, discussed for claim 33 above, does not explicitly disclose repositioning the document (2). However, one of ordinary skill in the art would have realized the advantage of repositioning the document in the feeder such that the document is feed after repositioning and without skew or with little skew within the tolerable value. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to reposition the document (2) of Seto in the feeder in order to produce scan data from the document without skew or with acceptable skew.

8. Claims 7-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seto (U.S. Patent No. 5,124,810) in view of well known art.

Regarding claim 7, Seto discussed for claim 5 above differs from the claimed invention in the technique of calculating or determining the skew or slant value. The skew detection circuit (42) of Seto detects the document skew using information on the difference between the two positions x_1 and x_2 of the document side edge (col. 15, lines 1-25). Claim 7 defines the slant value to be a slant value comprising a ratio of the difference value of the first distance and the second distance to the appropriate length comprising a length [corresponding to a distance by which the document is fed in the

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intended feeding direction] sufficient to enable measuring of the slant value. However, the claimed technique is not patentable subject matter but is common knowledge to any one of ordinary skill in the mathematical art. Based on the discussion of and reason of obviousness given for claim 5, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the technique as claimed to calculate the skew (slant value) in the method of Seto to simplify the skew determining process.

Regarding claims 8-10, Seto discussed for claim 7 above discloses the skew detection circuit (42). Seto does not disclose calculating the skew or slant value using an electronic calculation device comprising a software calculation program or by an electronic calculation device comprising a calculator in a computer as claimed. However, the claimed features are not patentable subject matter because they are not novel but well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ any of such well known features to obtain the skew or slant value of Seto in order to speed up the processes.

9. Claims 25-29, are rejected under 35 U.S.C. 103(a) as being unpatentable over Seto (U.S. Patent No. 5,124,810) in view of Pasco et al. (U.S. Patent No. 6,064,778) as applied to claim 23 above, and further in view of well known art. Pasco et al. was cited/applied in the previous Office Action.

Regarding claims 25 and 26, Seto, discussed for the method of Seto in view of Pasco et al. discussed for claim 23 above, differs from the claimed invention in the technique of calculating or determining the skew or slant value. The skew detection circuit (42) of Seto detects the document skew using information on the difference between the two positions x_1 and x_2 of the document side edge (col. 15, lines 1-25). Claim 7 defines the slant value to be a slant value comprising a ratio of the difference value of the first distance and the second distance to the length [corresponding to a distance by which the document is fed in the intended feeding direction] sufficient to enable measuring of the slant value. However, the claimed technique is not patentable subject matter but is common knowledge to any one of ordinary skill in the mathematical art. Based on the discussion of and reason of obviousness given for claim 23, it would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the technique as claimed to calculate the skew (slant value) in the method of Seto in view of Pasco et al. to simplify the skew determining process.

Regarding claims 27-29, Seto discussed for claims 25 and 26 above discloses the skew detection circuit (42). Seto does not disclose calculating the skew or slant value using an electronic calculation device comprising a software calculation program or by an electronic calculation device comprising a calculator in a computer executing a scan job as claimed. However, the claimed features are not patentable subject matter because they are not novel but well known in the art. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ any of such

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well known features to obtain the skew or slant value of Seto in view of Pasco et al. in order to speed up the processes.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheukfan Lee whose telephone number is (571) 272-7407. The examiner can normally be reached on 9:30 a.m. to 6:00 p.m., Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward L. Coles can be reached on (571) 272-7402. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Cheukfan Lee
October 12, 2006